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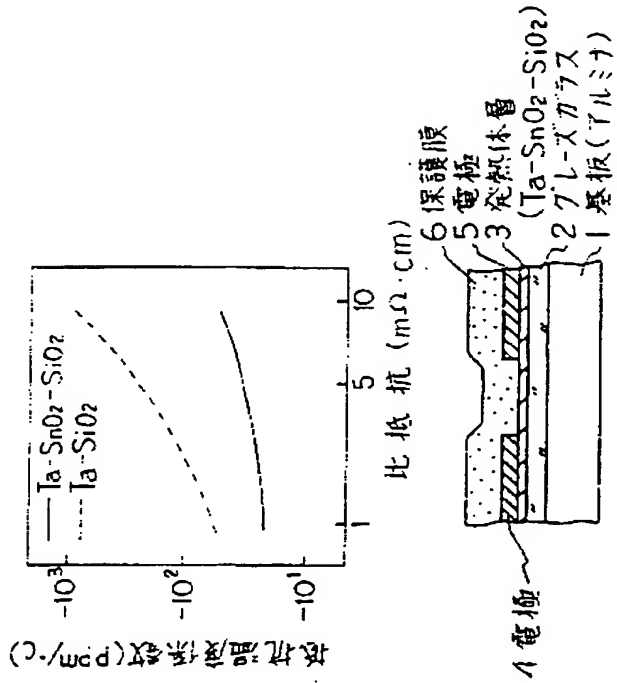
TITLE : HEAT GENERATING RESISTOR FOR THERMAL HEAD



ABSTRACT : PURPOSE: To obtain a long life and low cost thermal head having large specific resistance, low in a temp. coefficient of resistance and having pulse resistance, by using a Ta-SnO_2-SiO_2 membrane as a heat generating resistor.

CONSTITUTION: An insulating substrate 1 composed of alumina, a heat accumulating glazed glass layer 2, a heat generating resistor layer 3, electrodes 4, 5 composed of Cr, Cu or Au and a protective film composed of SiO_2, Ta_2O_5 or SiC are successively formed from below. Then, Ta-SiO_2 and Ta-SnO_2-SiO_2 are used in the heat generating resistor 3. A specific resistance value is changed according to a sputtering condition but control is performed by the wt. mol.% of Ta, SiO_2 and SnO_2 and, with respect to Ta-SiO_2, sputtering is performed under such a condition that Ta is set to 60~50%, the remainder SiO_2 to 40%, SnO_2 to 1~5% and the remainder to Ta on the basis of the wt. mol.% of a target. In the case of Ta-SiO_2, a temp. coefficient of resistance is largely changed along with a rise in specific resistance but, when SnO_2 is added, the temp. coefficient of resistance is low and reduced in change.